Stent-assisted detachable coil embolization of a late-onset wide-necked anastomotic renal allograft artery pseudoaneurysm

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A 56-year-old woman presented with bearing down. She had received a renal allograft 3 years before admission, without any renal complaints after transplantation. There was no fever. The physical examination findings were unremarkable. Her blood pressure was 143/102 mm Hg with a pulse rate of 68 beats/min. Laboratory tests revealed a white blood cell count of $5 \times 10^3/mm^3$, hemoglobin was 12.8 g/dL, and the serum creatinine level was 1.3 mg/dL.

A contrast-enhanced multislice helical computed tomography scan of the abdomen was performed. On the axial images (*A*), an ovoid mass with contrast filling at the arterial phase was seen in the right part of the pelvis (*arrows*). A selective iliac arteriogram (*B*) with three-dimensional reconstruction (*C*) confirmed the diagnosis of a large-necked pseudoaneurysm at the anastomotic site of the renal allograft artery.

An uncovered, flexible, self-expanding endovascular stent was placed at the base of the pseudoaneurysm in the renal allograft and external iliac arteries. Superselective coil embolization of the pseudoaneurysm cavity was then performed through the stent meshes using the packing technique: detachable microcoils of various lengths and diameters (DCS, Standart or Soft Detach-18 Embolization Coil System, Cook, Bjaeverskov, Denmark) were deployed across the neck into the pseudoaneurysmal sac. A control angiography showed total exclusion of the pseudoaneurysm perfusion, with preserved patency of the renal allograft artery and unchanged delineation of the external iliac artery (*D*).

The patient's postprocedural course was uneventful, without flow into the aneurysm cavity by duplex ultrasound imaging.

DISCUSSION

We are not aware of previous reports of anastomotic pseudoaneurysms of renal allograft artery managed using this endovascular method. Late-onset anastomotic pseudoaneurysm complicating renal transplantation is a rare entity.[1] In this situation, surgery is the preferred mode of management[1]; however, open surgical procedures have a high risk in such patients. Percutaneous transluminal placement of endovascular devices can be attempted.[2] This endovascular remodeling technique is generally used for the treatment of intracranial aneurysms, often with a stent-assisted method to avoid coil protrusion into the parent artery because of an unfavorable neck/sac ratio.[3] In our opinion, this conservative therapeutic option is an elegant and gentle treatment method that allows organ preservation in patients with complex pathologic anatomy. It may induce less morbidity than open surgery and may deserve to be used whenever possible, as it preserves the patency of the parent arteries.

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